"Quick user guide" for disposal of chemical residues into the waste water system

It is never desirable for chemicals to be poured into the wastewater system, but in some cases it is more beneficial for the environment at large if we can facilitate recycling of packaging or reduce transport.
The column “May be poured into wastewater system” lists the products that do not disturb the processes in the wastewater treatment plants or pollute the water or sludge.

Unless otherwise indicated, the column “May be poured into wastewater system” applies to minor quantities of residues from the original packaging.
“Minor quantities” refers to a maximum of around one litre per day per laboratory.
If the information refers to the product as a working solution, this will be stated. Note that residues in concentrated form may need to be handled as hazardous waste, even if the product may, as a working solution, be rinsed out during use, for example in a dishwasher.

Chemical products that are combined with other products must be assessed on the basis of all substances used in the mixture.

Acids and alkalis marked with an * on the list may be poured into the wastewater system, provided that they are diluted by flushing with copious volumes of water.

Vitamins, electrolytes, amino-acids, peptides, proteins, carbohydrates and lipids are not considered to represent any significant environmental impact. Residues may be poured into the wastewater system.

The list comprises the most commonly occurring products used at Karolinska Institutet and the Karolinska University Hospital.
Products and substances other than those included in the list may be assessed on the basis of the characteristics of the component substances. See Guide at the bottom of this document.

	Chemical product	Hazardous waste	May be poured into wastewater system	R phrases	Comment
*	*Acetic acid*		X	R10, R35	
	Acetone		X	R11,R36,R66,R67	
	Acetonitrile		X	R11,R20/21/22,R36	

	Chemical product	Hazardous waste	May be poured into wastewater system	R phrases	Comment
	Amalgam	X		R23,R33,R50/53,R11,R36/37/38,R20,R15,R17	
*	*Ammonia, Ammonium hydroxide*		X	R34,R50	
	Aperlan Poka-Yoke Agent A	X		R8, R34	
	Aperlan Poka-Yoke Agent B	X		R22, R35	
	Barium sulphate suspension		X	Labelling not mandatory	
*	*Benzoic acid*		X	R22,R36	
	Boric acid	X		R60,R61	
	Butanol		X	R10,R22,R37/38,R41,R67	
	Butanon=methyl ethyl ketone=MEK		X	R11, R36, R66, R67	
	Cacodylate buffer	X		R23/25,R50/53	
	Chlorhexidine solution	X		Labelling not mandatory	
	Chlorine	X		R36/38	See sodium hypochlorite
	Chloroform	X		R22,R38,R40,R48/20/22	
	Chlumsky's Solution	X		R23/24/25,R34,R48/20/21/22,R68	
	Chromic acid	X		R24/25,R26,R35,R42/43,R45,R46,R48/23,R50/53,R62,R9	
	Chromium trioxide	X		R24/25,R26,R35,R42/43,R45,R46,R48/23,R50/53,R62,R9	
	Cidex OPA Solution	X		R23/25,R34,R42/43,R50	
	Collodion	X		R12,R18,R19	
	Crystal Violet.	X		R22|R41|R45|R50/53|R68	With Bis-[4-(dimethylamino)phenyl]methanone
	Desflurane	X			Waste: Cytostatika och läkemedelsförorenat avfall
	EndoAct Instrument disinfection	X			
	EndoDis Instrument disinfection	X			
	Enflurane	X			Waste: Cytostatika och läkemedelsförorenat avfall
	Ethanol		X	R11	
	Ethidium bromide	X		R22,R26,R36/37/38,R68	See special rules
	Eugenol	X		R22,R43	
	Fluothane	X			Waste: Cytostatika och läkemedelsförorenat avfall

	Chemical product	Hazardous waste	May be poured into wastewater system	R phrases	Comment
	Formaldehyde solution/Formalin		X	R23/24/25,R34,R40,R43	For work environment reasons, formalin solutions should be disposed of a hazardous waste, unless special routines are in place to dispose of them otherwise.
*	*Formic acid*		X	R34	
	Gentian violet stock solution	X		R40,R52/53	See Crystal Violet.
	Giemsa solution	X		R11,R23/24/25,R39/23/24/25	
	Gigasept Instru AF working solution		X	R34	Risk phrases refer to concentrate.
*	Glacial acetic acid		X	R10,R35	
	Glycerol		X	Labelling not mandatory	
	Halotone	X			Waste: Cytostatika och läkemedelsförorenat avfall
	Hand disinfectant -Softa-Man Gel -Softa-Man Rub -LIV IPA 60 -Sterisol (isopropanol)		X	Product-dependent	
	Hand disinfectant: - Desisoft; - Sterillium; -Sterisol (ethanol); - Dax Preop 70; - DermaPreop;	X		Product-dependent	
	Hart's Chloroform	X		R22,R38,R40,R43,R48/20/22	
*	*Hydrochloric acid*		X	R34,R37	
	Hydrogen peroxide solution		X	Labelling not mandatory	
	Hydroquinone	X		R22,R40,R41,R43,R50,R68	
	Iodine potassium iodide	X		R22	
	Isoflourane	X			Waste: Cytostatika och läkemedelsförorenat avfall
	Jodopax	X		R36/38	
	Lapis solution	X		R34,R50/53	
	Maleic acid		X	R22,R36/37/38	
	Mannitol solution		X	Labelling not mandatory	

	Chemical product	Hazardous waste	May be poured into wastewater system	R phrases	Comment
	May-Grünwald reagent	X		R11,R23/24/25,R39/23/24/25	
	Merbromin solution	X		R26/27/28,R33,R50/53	
	Merckofix		X	R11	
	Mercury salts	X		R22,R36/37/38,R50/53	
	Mercury solutions	X		R22,R36/37/38,R50/53	
	Mercury, metallic	X		R23,R33,R50/53	
	Methanol		X	R11,R23/24/25,R39/23/24/25	
	Methyl methacrylate	X		R11,R37/38,R43	
	Methylrosaniline solution	X		See Crystal Violet.	See Crystal Violet.
	M-sprit (rubbing alcohol)/*M-sprit* surface disinfectant		X	R10	
	Nail varnish remover		X	R11, R36, R66, R67	
*	*Nitric acid*		X	R34	
	Paraffin oil	X		Labelling not mandatory	Blocks the wastepipe
	Perasafe		X	R22,R36	Risk phrases refer to powder
	Perchloric acid	X		R35,R5,R8	
	Petrol	X		R12,R38,R45,R51/53,R65,R67	
	Phosphate buffer solution		X	Labelling not mandatory	
*	*Phosphoric acid*		X	R34	
	Phospho-wolfram acid	X		R34,R8	
	Picric acid solution	X		R2,R23/24/25,R4	
	Potassium chlorate	X		R20/22,R51/53,R9	
	Potassium dichromate	X		R21,R25,R26,R34,R42/43,R45,R46,R48/23,R50/53,R60,R61,R8	
	Potassium hexacyanoferrate	X		R52/53	
*	*Potassium hydroxide*		X	R34	
	Potassium iodide		X	R20/21,R36/38,R50	
	Potassium nitrate	X		R8	
	Potassium permanganate	X		R22,R50/53,R8	
	Potassium sulphate solution		X	Labelling not mandatory	
*	*Propanoic acid*		X	R34	

	Chemical product	Hazardous waste	May be poured into wastewater system	R phrases	Comment
	Propanol		X	R11,R41,R67	
	Pump oil	X		Labelling not mandatory	
	Sevoflurane	X			Waste: Cytostatika och läkemedelsförorenat avfall
	Silica gel, >25%	X		Labelling not mandatory	
	Silver nitrate	X		R34,R50/53	
	Silver solutions	X		R52/53	
	Sodium azide	X		R28,R32,R50/53	
	Sodium bicarbonate solution		X	Labelling not mandatory	
	Sodium EDTA solution		X	Labelling not mandatory	
	Sodium fluoride solution		X	Labelling not mandatory	
*	*Sodium hydroxide solution*		X	R35	Note! NaOH together with water is very exothermic. Always add NaOH togehter with water slowly under controlled conditions. Only very dilluted solutions can be poured out.
	Sodium hypochlorite	X		R31,R34,R50	
	Starch solution		X	Labelling not mandatory	
	Stieve's fixing agent	X		R20,R25,R340,R41,R43,R48/21/22	
*	*Sulphuric acid*		X	R35	
	Surface disinfectant -Desisoft	X		Product-dependent	
	Surface disinfectant -LIV Surface disinfection +45 -LIV Surface disinfection 70		X	Product-dependent	
	Tincture of chlorhexidine	X		R10	
	Tincture of iodine	X		R11,R23/24/25,R39/23/24/25	
	Toluene	X		R11,R38,R48/20,R63,R65,R67	
	Topmatic Clinil	X		R34	
	Trichloroacetic acid	X		R35,R51/53	
	Trypan blue solution	X		R45	
	Turpentine	X		R10,R20/21/22,R36/38,R43,R51/53,R65	
	Urea		X	Labelling not mandatory	

Chemical product	Hazardous waste	May be poured into wastewater system	R phrases	Comment
White spirit	X		R11,R38,R51/53,R65,R67	
Virkon working solution		X	R38,R41,R52	Risk phrases refer to powder
Xylene	X		R10,R20/21,R38	
Zinc formaldehyde	X		R40, R43, R52/53	

Risk phrases for guidance regarding products not included in this list.

Risk phrases	Characteristics	Handling
R50, R50/53, R51/53, R53, R54-R59	Environmentally hazar	Hazardous waste, cannot be poured into wastewater system.
R45, R49, R40, R46, R60, R61, R62, R63	Carcinogenic, mutagenic, toxic to reproduction	Hazardous waste, cannot be poured into wastewater system.
R34, R35	Corrosive	May be poured into wastewater system unless they have other hazardous characteristics, and if they are diluted by flushing with copious quantities of water.

For more information about risk phrases, see http://www.kemi.se/upload/Forfattningar/KIFS/K05_7.pdf, pages 10-12.

2010-06-24

The list has been jointly been produced by Karolinska Institutet, the Karolinska University Hospital, Stockholm Vatten, Käppalaförbundet and SLL Miljö.